

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BLAKE A. GILLETT, SEAN T. CROWLEY,
BRADLEY D. BOLAND and KEITH M. EDWARDS

Appeal No. 2004-0763
Application 09/827,791

ON BRIEF

Before GARRIS, WARREN and OWENS, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the refusal to allow claims 1-9 and 21-31 as amended after final rejection. These are all of the claims pending in the application.

THE INVENTION

The appellants claim a leadframe for a two-lead, surface-mounting, high power semiconductor package, and claim a

semiconductor package which includes the leadframe. Claim 1, directed toward the leadframe, is illustrative:

1. A leadframe for a two-lead, surface-mounting, high power semiconductor package, the leadframe comprising:

a microstructure having parallel and respectively co-planar upper and lower surfaces, including:

an I-shaped die pad having a head, a foot, and opposite first and second sides;

an elongate, straight first lead disposed at the foot of the die pad, the first lead having a side aligned with the first side of the pad, a proximal end proximate to the die pad, and an opposite, distal end; and

an L-shaped second lead disposed at the foot of the die pad, the second lead having a side aligned with the second side of the die pad, a proximal end, an opposite, distal end, and a wire bonding arm extending along the die pad in spaced relation thereto, the wire bonding arm defining the proximal end of the second lead which is disposed proximate to the first lead.

THE REFERENCES

Magni	6,281,566	Aug. 28, 2001 (filed Sep. 25, 1997)
Huang	6,384,472	May 7, 2002 (filed Mar. 24, 2000)

THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows:
claims 1-3, 5, 6, 8 and 9 over the appellants' prior art
figures 1-3 (APAF 1-3) in view of Magni; claims 4 and 7 over
APAF 1-3 in view of Magni and Huang; claims 21, 23, 25, 26

and 28-31 over APAF 1-3 in view of Huang; and claims 22, 24 and 27 over APAF 1-3 in view of Huang and Magni.

OPINION

We reverse the aforementioned rejections. We need to address only the independent claims, i.e., claims 1, 5, 21 and 26.

Each of the independent claims requires an elongate, straight first lead and an L-shaped second lead having a wire bonding arm with a proximal end which is proximate to the first lead. For these claim features the examiner relies upon APAF 1-3 (answer, pages 4-7). The examiner argues, regarding APAF 1-3 (answer, page 9):

As seen from the top view of the package, the lead (16) having a small wiring bonding arm portion (closest to the die pad) is generally elongate. The elongate portion is the part that extends away from the die pad and has the distal end. Because the elongate portion of the lead has no curvature, the examiner has interpreted this lead to be elongate and "straight."

The claims require an elongate, straight first lead, not a first lead having a straight, elongate portion. The examiner has not explained how lead 16 can be considered straight while lead 20, which has a similar shape, is L-shaped. Also, the examiner has not explained how lead 16's elongate portion itself can be considered a lead, particularly considering that wire 30

is shown as being bonded not to the elongate portion but, rather, to the shorter arm of lead 16 which is parallel to the die pad.

As for the claim requirement that the proximal end of the second lead is proximate to the first lead, the examiner merely asserts that "[t]he device [APAF 1-3] includes a wire bonding arm extending along the die pad in a spaced relation thereto, the wire bonding arm defining the proximal end of the second lead which is disposed proximate to the first lead" (answer, page 5). The examiner not explained how, in light of the appellants' specification, the proximal end of the second lead reasonably can be considered proximate to the first lead when the proximal ends of the leads have lead 18, permanently connected to the die pad (specification, page 2, lines 11-12), between them (figure 1).

For at least the above reasons the examiner has not established a *prima facie* case of obviousness of the appellants' claimed invention. Thus, we need not address the other disputed issues involving APAF 1-3, Huang and Magni.¹

¹ The examiner does not rely upon Huang or Magni for any teaching that remedies the above-discussed deficiency in the examiner's argument as to APAF 1-3.

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DECISION

The rejections under 35 U.S.C. § 103 of claims 1-3, 5, 6, 8 and 9 over APAF 1-3 in view of Magni, claims 4 and 7 over APAF 1-3 in view of Magni and Huang, claims 21, 23, 25, 26 and 28-31 over APAF 1-3 in view of Huang, and claims 22, 24 and 27 over APAF 1-3 in view of Huang and Magni, are reversed.

REVERSED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
CHARLES F. WARREN)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
TERRY J. OWENS)	
Administrative Patent Judge)	

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